

# PATENT ABSTRACTS OF JAPAN

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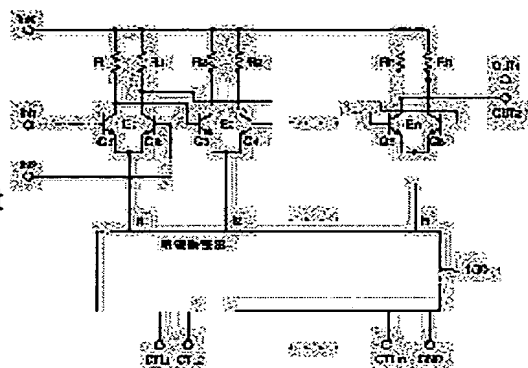
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## (54) GAIN CONTROL AMPLIFIER AND ITS CONTROL METHOD

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To attain a high gradation of gain control width and the linearity of gain control with high accuracy by preparing the current control means between (m) pieces of input terminals and (n) pieces of connection terminals connected to the common emitter terminals and inputting the binary signals of 'H' and 'L' to those input terminals to apply gradation control to all gain widths of differential amplifiers connected via the n-step input.

**SOLUTION:** The differential amplifiers E1 to En are prepared together with a current controller 100 which controls the currents flowing to the common emitter terminals of amplifiers E1 to En respectively. The controller 100 has (m) pieces of binary signal input terminals CTL1 to CTLm (m: an integer of 2 or more) and (n) pieces of connection terminals which are connected to the common emitter terminals of amplifiers E1 to En respectively. In such a constitution, the controller 100 can select 2<sup>m</sup> steps of output current levels via (n) pieces of connection terminals and according to the combinations of high and low levels of signals which are applied to the terminals CTL1 to CTLm.



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